

Appl. No. 10/589,471
Amdt. dated September 10, 2010
Reply to Office action of May 11, 2010

REMARKS

Claims 11, 13-19 and 21-27 are currently present in the application. Claims 12 and 20 have been canceled. Claims 11, 14 and 16 have been amended. New claims 21-27 are added herein by the above amendment.

Applicant would like to thank the examiner for the thorough consideration given to this application. In view of the cited and applied prior art, independent claim 11 has been amended to more specifically recite structural features of the device for pumping fuel that is neither disclosed nor suggested by the cited prior art.

However, before discussing the amendments to claim 11, applicants would like address the objections made by the examiner to the abstract, title and claim 14.

The examiner objected to the abstract of the disclosure as not being a single paragraph in length. However, applicants would like to direct the examiner's attention to page 10 of the preliminary amendment, filed August 14, 2006, wherein the original abstract was replaced by a new abstract which is a single paragraph in length. Thus, the abstract is in compliance with MPEP § 608.01(b). Accordingly, no correction is required and withdrawal of the objection is respectfully requested.

The title of the invention was objected to by the examiner as not being descriptive. The original title has been replaced by a new title that applicants' believe is descriptive of the invention. Therefore, withdrawal of the objection is respectfully requested.

Claim 14 was objected to by the examiner because the word "originating" in line 2 of the claim should be -- originates --. Claim 14 has been amended as suggested by the examiner. Therefore, withdrawal of the objection is respectfully requested.

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Reconsideration of the rejection of claims 11, 13, 14 and 16-20 under 35 U.S.C. 102(b) as being anticipated by Aker (US 4,522,141), or in the alternative, under 35 USC 103(a) as being unpatentable over Applicants' admitted prior art (hereafter AAPA) in view of Aker (US 4,522,141) is respectfully requested.

Claim 11, as amended, is directed to a device for pumping fuel having a suction jet pump 1 that has a fuel line 2 and a mixing conduit 3, in which, in a first partial section 2.1 of the fuel line 2 oriented toward the mixing conduit 3, a nozzle-like constriction 4 with a nozzle opening 5 is provided, and the fuel line 2 fluidly communicates with the mixing conduit 3 via the nozzle opening 5, the improvement comprising at least one rib 27 between the first partial section 2.1 of the fuel line 2 and the mixing conduit 3, the at least one rib 27 connecting the first partial section 2.1 of the fuel line 2 to the mixing conduit 3 in one piece, and a housing 31 containing a second partial section 2.2 of the fuel line 2 in fluid communication with the first partial section 2.1 of the fuel line 2 and a mount 32 for the mixing chamber 3, the mount 32 having a first receiving opening 33 and the second partial section 2.2 of the fuel line 2 having a second receiving opening 34, wherein the mixing conduit 3 is thrust, with the integrally joined first partial section 2.1 of the fuel line 2 leading, into the first receiving opening 33, until the first partial section 2.1 of the fuel line 2 protrudes into the second receiving opening 34 of the second partial section 2.2 of the fuel line 2.

Claim 11, as amended, requires the at least one rib connect the first partial section of the fuel line to the mixing conduit in one piece, and a housing containing a second partial section of the fuel line in fluid communication with the first partial section of the fuel line 2 and a mount for the mixing chamber, the mount having a first receiving opening and the

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second partial section of the fuel line having a second receiving opening, wherein the mixing conduit is thrust, with the integrally joined first partial section of the fuel line leading, into the first receiving opening, until the first partial section of the fuel line protrudes into the second receiving opening of the second partial section of the fuel line.

To support a rejection of a claim under 35 U.S.C. 102(b), it must be shown that each element of the claim is found, either expressly described or under principles of inherency, in a single prior art reference. See Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

With regard to the rejection of the claim 11 under 35 U.S.C. 102, Aker is relied upon by the examiner as disclosing a suction jet pump (21) including a pressurized fluid line (14) oriented towards a mixing duct (portion of outer housing extending from inlet pipe 32 to beginning of pipe 33 as shown in Fig. 6), a nozzle-like constriction (24) through which the pressure line fluidly communicates with the mixing duct, and plural ribs (49) which are curved and extend between the nozzle-like constriction and the mixing duct, wherein the ribs, when viewed in the axial direction, are small when compared to the cross section of the mixing duct. The examiner acknowledges that the fluid being pumped is not fuel, but concludes that the structure of the suction pump of Aker anticipates the claimed device nonetheless.

While the examiner has identified the portion of the outer housing extending from inlet pipe 32 to the beginning of pipe 33 (Fig. 6) as the mixing conduit, the examiner has not identified the element in Aker that constitutes the first partial section of the fluid line.

Applicants read the portion of the element 24 screwed into the flange 47 to the right of

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manifold 14 (Fig. 6) as the *first partial section* of the fluid line since it is the only element provided with a nozzle-like constriction and a nozzle opening as claimed. However, as may be clearly seen from Figs. 1 and 8, the ribs 49 do not connect the first partial section of the fluid line to the mixing conduit in one piece as required by amended claim 11. Moreover, the claim, as amended, further recites a *housing* containing a *second partial section* of the fuel line and a *mount* for the mixing chamber. Manifold 14 (Fig. 6) is the only structural element that can be read as the housing containing a second section of the fluid line since it is the only element that has a partial section of the fluid line in fluid communication with the first partial section of the fluid line. However, manifold 14 lacks the structural arrangement recited in the claim, namely, a mount for the mixing chamber, the mount having a first receiving opening and the second partial section of the fuel line having a second receiving opening, wherein the mixing conduit is thrust, with the integrally joined first partial section of the fuel line leading, into the first receiving opening, until the first partial section of the fuel line protrudes into the second receiving opening of the second partial section of the fuel line.

Therefore, Aker is deficient under 35 U.S.C. 102 in anticipating claim 11.

Withdrawal of the rejection is respectfully requested.

With respect to the rejection of the claim 11 under 35 U.S.C. 103(a), the examiner relies upon AAPA in claim 11 (claim written in Jepson format) for disclosing a device for pumping fuel having a suction jet pump that has a fuel line and a mixing conduit, in which, in a first partial section of the fuel line oriented toward the mixing conduit, a nozzle-like constriction with a nozzle opening is provided, and the fuel line communicates fluidically with the mixing conduit via the nozzle opening.

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The examiner acknowledges that AAPA does not disclose at least one rib between the first partial section of the fuel line and the mixing conduit and relies upon Aker for teaching ribs 49 between a first partial section of a fluid line and a mixing conduit.

The examiner concludes that it would have been obvious to include ribs, as taught by Aker, in AAPA suction jet pump in order to support the nozzle and direct the [fluid] flow.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Claim 11, as previously pointed out, has been amended to include the following limitations: the at least one rib connecting the first partial section of the fuel line to the mixing conduit in one piece, and a housing containing a second partial section of the fuel line in fluid communication with the first partial section of the fuel line 2 and a mount for the mixing chamber, the mount having a first receiving opening and the second partial section of the fuel line having a second receiving opening, wherein the mixing conduit is thrust, with the integrally joined first partial section of the fuel line leading, into the first receiving opening, until the first partial section of the fuel line protrudes into the second receiving opening of the second partial section of the fuel line.

As discussed with respect to the rejection of claim 11 under 35 USC 102, the ribs 49, as may be clearly seen in Figs. 1 and 8 of Aker, do not connect the first partial section of the fluid line to the mixing conduit in one piece as claimed. Moreover, Aker does not teach a *housing* containing a *second partial section* of the fluid line and a *mount* for the mixing chamber as claimed. Manifold 14, as shown in Fig. 6 of Aker, is the only element that can be

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read as the housing containing a second section of the fluid line since it is the only element that has a partial section of the fluid line in fluid communication with the first partial section of the fluid line. However, manifold 14 lacks the structural arrangement recited in the claim, namely, a mount for the mixing chamber, the mount having a first receiving opening and the second partial section of the fuel line having a second receiving opening, wherein the mixing conduit is thrust, with the integrally joined first partial section of the fuel line leading, into the first receiving opening, until the first partial section of the fuel line protrudes into the second receiving opening of the second partial section of the fuel line.

Accordingly, Aker does not make up for the shortcomings of AAPA. Thus, the combination of Aker with AAPA does not disclose, teach or suggest the recited structural arrangement of amended claim 11. Therefore, the invention is not rendered obvious as required by 35 U.S.C. 103 and withdrawal of the rejection is respectfully requested.

Claims 13, 14 and 16-20, by virtue of their dependency upon claim 11, are neither anticipated by Aker under 35 U.S.C. 102, nor rendered unpatentable over AAPA in view Aker under 35 U.S.C. 103. Therefore, withdrawal of the rejection is respectfully requested.

Reconsideration of the rejection of claims 12 and 15 under 35 U.S.C. 103(a) as unpatentable over Aker (US 4,522,141) in view of Cook (US 3,166,020), or AAPA in view of Aker (US 4,522,141) and further in view of Cook (US 3,166,020) is respectfully requested.

The examiner acknowledges that neither Aker nor AAPA in view of Aker discloses that the nozzle rib and the mixing conduit are one piece or that the rib extends beyond the nozzle.

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Cook is relied upon by the examiner to teach a similar suction jet pump having a one piece nozzle 24, plural ribs 25, and a mixing conduit 23 where the ribs extend beyond the nozzle.

The examiner concludes that it would have been obvious to make the nozzle, ribs and conduit of Aker [or AAPA as modified by Aker] of one piece in order to reduce the number of parts, and extend the ribs beyond the nozzle for proper flow and nozzle support.

However, notwithstanding the examiner's conclusion of obviousness, claim 11 has been further amended and requires the suction jet pump to include a housing containing a second partial section of the fuel line in fluid communication with the first partial section of the fuel line 2 and a mount for the mixing chamber, the mount having a first receiving opening and the second partial section of the fuel line having a second receiving opening, wherein the mixing conduit is thrust, with the integrally joined first partial section of the fuel line leading, into the first receiving opening, until the first partial section of the fuel line protrudes into the second receiving opening of the second partial section of the fuel line.

In Cook (Fig. 2), while one might possibly read the orifice chamber 33 in rear housing 24 as the first partial section of the fluid line oriented toward the mixing conduit 23, the reducer coupling 22 as the housing containing the second partial section of the fluid line in fluid communication with the first partial section of the fluid line, and threading 40 on the forward end of the reducer coupling as the mount for the mixing chamber, Cook neither discloses, teaches nor suggests that the mount has *a first receiving opening and the second partial section of the fuel line has a second receiving opening, wherein the mixing conduit is thrust, with the integrally joined first partial section of the fuel line leading, into the first*

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receiving opening, until the first partial section of the fuel line protrudes into the second receiving opening of the second partial section of the fuel line.

Accordingly, the combination of Aker and Cook or AAPA, Aker and Cook does not disclose, teach or suggest the recited structural arrangement set forth in amended claim 11. Therefore, the invention is not rendered obvious as required by 35 U.S.C. 103 and withdrawal of the rejection is respectfully requested.

New claims 21-27 have been added by this amendment. Applicants believe these claims are allowable over the prior art of record since none of the prior art references, individually or combined, disclose or suggest the structural arrangement recited in claim 11, from which these claims depend. Consideration of claims 21-27 is respectfully requested.

The Commissioner is hereby authorized to charge any necessary fees in connection with this communication to Deposit Account Number 07-2100.

Entry of the amendment and allowance of the claims is respectfully solicited.

Respectfully submitted,

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